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THE DIAGNOSIS OF GLANDERS.

The clinical diagnosis of glanders is often difficult, sometimes impossible. Some years ago inoculation of a donkey was the only ready method of settling a doubtful case, and it was uncertain, because a chronic discharge often contains few bacilli, and then inoculation fails. A more certain method followed — inoculation of a guinea-pig, which gave in a few days the specific affection of the testicles.

Then mallein was introduced, and we soon found we had a reliable test giving a reaction in 24 hours. Now it is claimed that "the agglutination method" is better, and the Prussian Government has adopted it as the official test. It is curious that in science the German has not been able to overcome his antagonism to the French, and so when we find any method largely adopted in France we are not surprised to see it ignored or objected to in Germany. This fact makes us suspect any views expressed in Germany which are not in accordance with our own experience. Nocard believed in mallein, and naturally Schütz does not.

On page 272 will be found an article taken from the *American Veterinary Review*. As Veranus A. Moore is one of the joint authors we must take it seriously. It gives a history of the work done on the subject of the agglutination method of diagnosing glanders, and details some original experiments. The conclusions of the authors are — "The diagnosis of glanders by the agglutinating method is easier and quite as accurate as mallein. . . . . The method while simple in its details, requires in its application the closest of attention and constant checking, because of the liability of the culture losing unexpectedly its susceptibility to the agglutination."

This seems to us small praise. We may paraphrase the conclusion by saying—Agglutination is as accurate as mallein when practised by a good bacteriologist in a laboratory, but no better. The mallein test is just as accurate and much simpler.

As far as we can see the German and American workers have got no further than M'Fadyean in 1896, who then said — "Considering the perfect reliability of the mallein test and the simplicity of its application it cannot be expected that the method of sero-diagnosis (agglutination) will displace it." With mallein we can arrive at a safe conclusion anywhere; with agglutination we want a laboratory and a bacteriologist.

THE USE OF BISMUTH IN GASTRIC TYMPANY.

Subject.—A male fox-terrier, eight or nine years old, who had for some time been affected with valvular insufficiency, accompanied by some amount of ascites. He was a greedy feeder, and being the property of rather injudicious owners, not uncommonly suffered from digestive trouble.

One day he was brought to me, presenting the symptoms of a not very severe attack of gastritis, and with a history of having repeatedly vomited during the last few hours. I therefore took the usual measures of Brand's Essence, restriction of water, and complete withdrawal of solid food, and prescribed small doses of Sodii sulphocarbolas—a remedy I was at that time rather partial to.

The emesis did not return, and the case appeared to make satisfactory progress till about forty-eight hours after I first saw the dog, when the owners, by my advice, gave the first portion of solid food since commencing treatment, viz., about a dessertspoonful of lean, finely cut mutton, almost, though not quite, raw. Here the first unusual symptom appeared, for very soon after taking this the dog became uneasy, and in little more than an hour was in most acute pain from excessive tympany which, as far as I could judge, appeared to be almost, if not quite, confined to the stomach. This I treated with a mild laxative, a mixture composed of Infus. Caryophylli and Tinct. belladonna every three hours, and (while the tympany was acute) small hourly doses of brandy. All trace of tympany disappeared in two or three hours, and the laxative acted in due course, so, after keeping the dog on Brand's Essence till the next day I again tried the effect of solid food. Precisely the same kind and quantity as before was given, with precisely the same result—acute and alarming gastric tympany, which quickly yielded to a repetition of the former treatment. I may say that on both days I saw samples of the meat that had been given, and found it perfectly fresh.

I now determined to give some antiseptic with the food, and chose Bismuth sub. nitrat., grs. xx., of which in powder was well mixed with the mutton on the following day, and readily swallowed by the dog. No trace of flatulence followed, so I continued to give meat mixed with Bismuth every four hours, quickly increasing the amount of food as I found it was tolerated, but not altering the dose of the drug.

The case now made an uninterupted recovery, and in three days time I discontinued the bismuth, prescribed a tonic mixture, and thought no more of it.

Four or five days after this, however, the animal, then appearing perfectly well, was unwisely indulged with a heavy meal of rich food, which again induced vomition. During this attack, while in the act of retching, he suddenly fell forwards, and was picked up dead.

I made a post-mortem, and verified the existence of valvular heart disease, which I had diagnosed clinically some months before. The abdominal cavity contained a little fluid, and the stomach was larger, and its walls thinner than usual; but all other organs appeared normal.

Remarks.—Sudden death during retching, apparently from cardiac failure, is not very rare in the dog. But the interest of the case lies in the evidence it affords of the utility of bismuth in preventing gastric fermentation. I gave it with the idea (which is *not* original, but not, I think, orthodox) of producing nitric acid by interaction with H_2S, and whether or not the theory be correct, the result was satisfactory.

Several times since I have had good results from the administration of bismuth *in* the food in cases of flatulence after eating; but I have not had the opportunity of trying it again in another case as acute as was the above.

PARACELSUS.

THE AGGLUTINATION METHOD FOR THE DIAGNOSIS OF GLANDERS.*

By VERANUS A. MOORE, WALTER J. TAYLOR, AND WARD GILTNER, ITHACA, N.Y.

Read at the Meeting of the Am. Vet. Med. Association, New Haven, Sept. 1906.

The accurate diagnosis of glanders in obscure cases and in horses that have been exposed but which fail to exhibit symptoms of the disease, is one of the difficult problems in Comparative Medicine The successive acquisition of definite knowledge of the nature of glanders lesions, of the life history of its specific bacterium and the effect of mallein have each tended to minimise error in diagnosis. The last and apparently most successful method is that based upon the power of the blood serum of an infected animal to agglutinate in high dilutions the infecting bacterium. It is the purpose of this paper to discuss briefly the results that have already been reported from the study of the agglutination of *Bacterium mallei*, in its relation to diagnosis, together with a summary of our findings.

For an intelligent understanding of the phenomenon of agglutination, a brief statement of its history, the properties of agglutinins and the character of agglutination is appended.

In 1889, Charrin and Rogers found that *Pseudomonas pyocyaneus* cultivated in the fluid serum of an animal immunised against that organism, did not produce a diffuse turbidity of the serum such as appears if it is grown in the serum of a non-immunised individual. Instead of being scattered through the culture medium as usual, the organisms were joined in little clumps which settled at the bottom of the tube. Examined microscopically in the immune serum, the Pseudomonas were observed to group themselves in clumps instead of swimming about freely. This was the first recognition of the phenomenon of agglutination, but its application to diagnosis was not made until 1896. In the meantime Metchnikoff in 1891, Issaeff in 1893, Pfeiffer in 1894, and Bordet in 1895, had all observed the same phenomenon in various lines of experimentation. The macroscopic and microscopic reactions, the importance of proper dilutions, quantitative estimation of agglutinative power, its value in differentiation of bacterial species, the determination of a previous attack of the disease and many other details were described by Grüber and Durham in 1896. Widal was the first to show that the agglutinative power of the serum exists not only in artificially immunised animals and in the blood of convalescents, but also during the early period of infection and at the height of the disease. Widal insisted that the reaction was not one of immunity but one of infection, and his contention, at least on the negative side, has been entirely borne out by later investigators. Widal's discovery was generally confirmed.

The application of agglutination in diagnosis has been more or less successfully made in typhoid fever, hog cholera, Asiatic cholera, pneumonia, bubonic plague, tuberculosis, and other infections.

The literature on serum diagnosis as applied to glanders is far from extensive. It appears that M'Fadyean was the first to record any attempt to determine the agglutinative power of glandered serum. We quote from M'Fadyean (*The Journal of Comparative Medicine and Therapeutics* for 1896), what we believe to be the foundation of the present method of serum diagnosis of glanders.

"It has for some years been known that the blood-serum of an animal experimentally rendered immune against a particular disease exerts a peculiar action on the specific bacteria of that disease, the most manifest effect of this action being a grouping of the bacteria into relatively coarse clumps when they are freely suspended in liquid. Widal discovered that this action is not confined to animals experimentally made immune, or hyper-vaccinated, but is also possessed by the blood of human beings suffering from typhoid fever, as he showed that it might be utilised in the diagnosis of that disease. Grünbaum, Durham, and Grüber, and Delépine and Sidebotham have published observations that are confirmatory of Widal's discovery.

"The demonstration of this remarkable property of the blood of typhoid patients immediately suggests that in ordinary bacterial diseases of man and animals the blood may exert a similar effect on the specific microbes, and the purpose of the present note is to put on record some observations which appear to show that the method of sero-diagnosis is applicable to the case of glanders.

"On the 19th of December I collected a few ounces of blood from a horse affected with chronic glanders. The blood serum of this horse when diluted with nine times its volume of sterile bouillon and mixed with an equal volume of bouillon holding in suspension a rich culture of glanders bacilli (three days culture on agar at 37°C.) was found to produce a marked 'clumping' of the bacilli. The reaction was quite distinct after an hour, and at the end of two hours almost the whole of the bacilli had become motionless and collected into large irregular clumps.

"Control observations were made at the same time with blood serum (diluted to the same extent) from two horses not suspected of being glandered, and since tested by mallein with a negative result. The serum from one of these animals produced no appreciable clumping even after several hours; in the other case a tendency to clumping was observable in some of the preparations, but it was later in setting in, and never anything like so complete as in the preparations from the glandered horse.

*Abstract from an article in *The American Veterinary Review*, Oct., 1906.

"The observations here referred to were made on hanging-drop preparations viewed under the microscope.

"Should further observations confirm these results, a valuable addition to our methods of diagnosing glanders will have been made. Considering the perfect reliability of the mallein test and the simplicity of its application, it cannot be expected that the method of serodiagnosis will displace it, for Widal's method must always remain a laboratory test. But the latter has the advantage of being serviceable for diagnosis on the dead subject, and it may be employed as a prompt confirmatory test in those occasional cases in which no glanders lesions, or only lesions of a doubtful character, are discovered at the autopsy of horses that have reacted to mallein."

In 1898, Bourget and Mery examined microscopically the action of the serum on the specific bacteria of two horses affected with acute and one with chronic glanders. The serum of the latter agglutinated at a dilution of about 1-1000. The acute case reacted as high as 1-2000 at room tempe ature. In repeating the experiments with the serum of non-glandered horses, using normal serum, serum of horses affected with fever and of horses treate' with anti-diphtheritic serum, they determined that agglutination was produced under the same conditions at dilutions of 1-50, 1-200, and 300, but never higher. They conclude by saying that these deductions point to a hope that in employing a serum at a dilution of 1-500, one could establish by serum diagnosis whether a horse was glandered or not.

The serum of a sound horse agglutinates at a maximum dilution of 1-300 in a bouillon culture.

The serum of glandered horses shows a wider and higher agglutinating power, the reaction being macroscopic at a dilution of 1-500 and microscopic as high as 1-1000. Two horses showed the reaction before and during malleination, and in the latter case the agglutinating power of the blood was doubled. The reaction being microscopic at a dilution of 1-2000.

Arpad found that glanders bacteria were agglutinated with the blood serum of non-glandered horses in a maximum dilution of 1-350 and of glandered horses at least two to three times as great a dilution. In one case he observed a reaction in a dilution as high as 1-1600.

Fedorowsky undertook the task of demonstrating the agglutination of *Bacterium mallei* from a pathological and differential diagnostic point of view. He made 143 examinations on the action of human blood and that of fifteen different species of animals, all in normal condition. In addition, he tested 118 other specimens of blo d from horses affected with glanders and certain other disease, in which agglutination occurred. His conclusions are as follows :

The blood of all animals examined, including guinea-pig, cat, rabbit, dog, sheep, goat, ape, rat, pig, cow, pigeon, hen, duck, goose, and the horse, agglutinated glanders bacteria in greater or smaller masses. The extent of the agglutination varied, in a given dilution, with the susceptibility of the animal to glanders, the higher the dilutions so much greater is the immunity.

The agglutinating power is present not only with the living but with the dead bacteria.

The agglutina ion of the dead bacteria does not give so sure or as rapid and certain a reaction as the live cultures.

The agglutinating power of the blood remains not only during the infection with glanders but also with some other diseases.

The power of the blood of glandered animals to agglutinate *Bacterium mallei*, exceeds this power in other diseases, to such a degree that the differential diagnostic significance of agglutination in glanders cannot be denied.

Rabieaux tested the blood of nine glandered and eleven non-glandered horses. The serum was collected as pure as possible, diluted in sterile distilled water in proportions of from one to ten to one to five hundred, then mixed in small sterile tubes with an equal volume of a culture of *Bacterium mallei* in peptonised glycerin free bouillon 24-72 h urs old. The mixture thus prepared was placed in an incubator 35-37°C. and examined at intervals under the microscope. In each case control tests were made on normal serum. At this temperature both glandered and non-glandered serum agglutinated, but a difference in the rapidity and intensity of the reaction was noted. Little difference was observed in the reaction at dilutions of 1-10 to 1-50. In glandered serum there were fewer motile-like bacteria between the more compact masses, and the reaction was observable in from twenty minutes to three hours, while two to six hours was necessary in non-glandered serum. With dilutions of 1-100 to 1-250 the difference was more marked. In eighteen hours the non-glandered serum agglutinated in masses produced in from one to ten hours by the glandered serum. The non-glandered serum may not agglutinate at all. In dilutions above 1-400 no -glandered serum never agglutinated while glandered serum agglutinated at from 1-500 to 1-1500. He placed 1-1000 at the minimum for condemnation. The rapidity varies with the individual. In two cases at a dilution of 1-1000, the result was obtained in from two to three hours, but not completely until after eighteen to thirty-six hours had elapsed. Sometimes forty-eight hours were required but never more than seventy-two. If the subject had an elevated temperature, the reaction occurred in from two to six hours, at a dilution of 1-1500 The whole of the bacteria may be collected in compact masses, or there may be loose clumps of fifteen to twenty organisms. In serum of high agglutinating power the bacteria in multiplying remains in short chains. The phenomenon may be visible to the unaided eye in dilutions of 1-10 or 1-100 and exceptionally in 1-1000 by small clumps collecting and falling to the bottom leaving a clear stratum. When agitated, they do not produce a uniform turbidity as seen in control cultures. This is not permanent in high dilutions.

Schütz and Miessner, of Berlin, have made an extended investigation of the serum diagnosis for glanders. They have succeeded to such a degree that their method has been adopted officially for the diagnosis of glanders in all suspected cases in the Army horses of Prussia. They recommended the use of glanders bacteria that have been killed by heating them for two hours at 60°C. The killed organisms are suspended in a carbolised salt solution. The suspension was made of a light greyish colour and distributed in small test tubes, putting 2 c.c. in each Various quantities of the diluted blood serum were added to this emulsion and the mixture incubated for 24-30 hours at 37°C.

The results of these experiments demonstrated that while the blood serum of healthy horses agglutinated the bacteria in dilutions of 1-400 at the highest the serum of glandered horses reacted in dilutions of from 1-1000 to 1-2000. The blood serum of horses artificially infected with a virulent culture gave a reaction beginning on the fifth to the seventh day after inoculation, the agglutinating power increasing during the following four or five days, remaining at its maximum for about one month, and after that gradually diminished. This is of practical importance in detecting glanders in a stable where infected horses have been destroyed, the test being made two or three weeks later. Experience led to the belief that a previous malleination had no effect on the agglutinating power of the serum.

The blood of non-glandered but diseased horses reacted occasionally in higher dilutions. Thus they found in cases of pleurisy and pneumonia that a reaction occurred in a dilution of 1-1000 while in other cases it did not occur in dilutions higher than 1-800. In the pathological Institute of the Veterinary College in Ber-

lin during two years, the blood serum of 2,209 horses were tested for glanders with the following results:

Of 1,911 horses free from glanders; the blood serum agglutinated in

1232	or 64.8	per cent.	1-100 to	1-300
363	„ 9.0	„		1-400
135	„ 7.1	„		1-500
123	„ 6.4	„		1-600
41	„ 2.2	„		1-800
11	„ .5	„		1-1000

A reaction higher than 1-1000 was not observed in a single case.

Of 298 glandered horses; the blood serum agglutinated in

6	or 2	per cent.	1-400
12	„ 4	„	1-500
44	„ 14.8	„	1-600
47	„ 15.8	„	1-800
75	„ 25.2	„	1-1000
49	„ 16.4	„	1-1500
65	„ 21.8	„	1-2000

A study of their tables shows that the greater percentage of reactions with normal serum has been with very low dilutions, while the greater percentage with glandered serum has reacted in dilutions so high that they were positively diagnostic Their experience shows that in glandered horses, the agglutinating power of the blood is with the passing of time radually diminished, while in horses free from glanders the agglutinating power of the blood does not change. Based upon their experience, they recommend the following method for the eradication of glanders:

Twenty to fifty grammes of blood are taken from the glandered or suspected horse, recording the date and history of the case, and sent to the experiment station.

All horses whose blood agglutinates in dilutions of 1-1000 or higher should be destroyed.

The same way, all horses should be destroyed whose blood agglutinates in dilutions of only 1-500 to 1-800 if they show symptoms of glanders.

After establishing glanders, the blood of horses in the same stable should be tested after three weeks, and this should be repeated until the last two tests show in all horses individually a uniform reaction.

During the past ye r, we have made a special study of the agglutination method for the diagnosis of glanders. For the greater part, our purpose has been to corroborate the method employed by Schütz and Miessner.

The application of the serum diagnosis of glanders in state and city sanitary work appears to have many advantages over the methods heretofore employed. The blood can be drawn by any veterinarian from the suspected horse with very little trouble and sent to the aboratory. However, the fact should be kept in mind that the method is a laboratory test Its requirements are such that it cannot be made in any b cteriological laboratory without sufficient notice and preparation. The necessary solutions must be ready, and cultures of *Bacterium mallei* which possess the agglutinating power must be in stock and of the proper age. To keep these in hand, requires more time, labor and expense than can be given by laboratory men for an occasional diagnosis. The practical work, therefore, will be restricted to boards of health laboratories or those doing the sanitary work for the city or state and perhaps to those of practitioners who have a large practice in stables where cases of glanders are of common occurrence. As in Prussia and Austria, it would seem advisable for each larger city and possibly state to have at least one laboratory where this work could be done. From these, sterile bottles for collecting the blood and instructions could easily be sent to any veterinarian who wished to have a positive diagnosis made.

Conclusions.

From the results we have obtained in testing the various procedures in the serum diagnosis of glanders as set forth by various investigators and summarised in the preceding pages, the following conclusions seem to be warranted:

1. The diagnosis of glanders by the agglutination method is easier and quite as accurate as mallein. It has this advantage, that it can be used in those cases where there is a rise of temperature and consequently where mallein could not be employed.

2. There appears to be no objections to the recommendations of Schütz and Miessner for the eradication of glanders based on this method of diagnosis.

3. The maximum dilution of normal serum that we have found capable of producing agglutination is 1-500. This is higher than that reported by others. It occurs, however, in but very few cases.

4. The maximum agglutinating dilution of the serum of diseased horses not glandered has not exceeded that of normal serum. This is lower than that recorded by others. We recognise, however, that our experience has been quite limited.

5. The interpretation of the results where the maximum dilution is about 1-500 gives the greatest difficulty. All cases of this kind, unless there are unquestioned diagnostic symptoms or lesions, should be retained for a subsequent test.

6. The method, while simple in its details, requires in its application the closest of attention and constant checking, because of the liability of the culture losing unexpectedly its susceptibility to the agglutinins.

DISEASES OF ANIMALS ACTS IN LONDON

Abstract from Report of the Chief Officer of the Public Control Committee of the London County Council.

These Acts have for their object the suppression of contagious diseases among animals, and the prevention of cruelty or suffering to animals during transit. The Acts are supplemented by Orders issued by the Board of Agriculture and Fisheries dealing with infectious disease in animals, disease-infected areas, and with precautionary measures for preventing the spread of disease.

The Council is the local authority for administering the Acts in London—except as regards foreign animals—and, in accordance with statutory authority, has appointed the Public Control Committee the Executive Committee for enforcing the Acts.

The reported cases of contagious diseases among animals in London, during the past year, were as follows:—

Anthrax.—Two horses and one cow, all of which died

Epizootic Lymphangitis.—Ten horses, eight of which were slaughtered by order of the owners, and two by order of the Council, for which £37 10s. was paid as compensation. Two other animals were slaughtered on account of having been exposed to infection.

Glanders.—1,382 horses, of which 1,330 were slaughtered by order of the Council, 10 by order of the owners, and 42 died Compensation amounting to £4,378 8s. 3d. was awarded in respect of 1,305 animals.

Swine Fever.—Four outbreaks; 36 swine were were killed by order of the Board of Agriculture, as diseased, or as having been exposed to infection.

For purposes of comparison, the amount of animal contagious disease that occurred in London during the past year and the ten preceding years is shown in the following table:—

Disease.	Number of animals attacked by disease.										
	1895-6	96-97	97-98	98-99	1899-00	1900-1	01-02	02-03	03-04	04-05	05-06
Glanders ...	965	887	955	832	1066	1486	1857	1572	2055	1718	1382
Swine Fever ...	76	73	22	23	7	36	41	22	5	11	36
Pleuro-Pneumonia ...	—	11	11	—	—	—	—	—	—	—	—
Sheep-scab ...	—	—	—	—	—	322	—	—	—	—	—
Anthrax	—	—	1	—	2	1	2	3	3	4	3
Rabies	46	61	13	1	—	—	—	—	—	—	—
* Epizootic lymphangitis	—	—	—	—	—	—	—	—	—	126	12

* This disease was only scheduled in 1904.

Glanders.

This malignant disease is regulated by the Glanders or Farcy Order of 1894, which requires owners or persons in charge of diseased animals to notify the fact. The Order gives permissive powers to local authorities to order the slaughter of diseased animals, subject to the payment of a minimum compensation of £2, and a maximum compensation of a quarter of the value of the animal immediately before it became affected. Suspected horses may also, with the consent of the owner, be slaughtered subject to the same rates of compensation, if found to be diseased. Full value compensation is required to be paid in respect of any animal slaughtered under the Order, and found on post-mortem examination not to be affected with glanders.

The Order enables local authorities to make regulations as to :—

(*a*) The movement and marking of suspected animals.
(*b*) The movement of auimals which have been in contact with diseased or suspected animals.
(*c*) The removal of manure, fodder, litter, etc., from infected premises.
(*d*) The removal and disposal of carcases; and
(*e*) Cleansing and disinfection.

The Council has made regulations dealing with these subjects; and those regulations which control the movement of in-contact animals would be very valuable in suppressing the disease, but for the proviso in the Order that they shall remain in force only so long as a diseased horse remains in the stable, or until the regulations as to cleansing and disinfection have been complied with. This limitation makes it impossible for an inspector to so closely supervise a stud as to ensure the suppression of the disease in the stable in which an outbreak occurred. It follows, therefore, that in large stables when the inspector cannot induce the owner to take effectual measures for detecting latent cases, the disease is rarely absent from the stud.

Of the 1382 cases of glanders which came to the knowledge of the inspectors during the past year, 371, or nearly 27 per cent., were diagnosed solely by mallein. The maximum compensation allowed by the Order was awarded in these cases. Mallein also aided diagnosis in 313 clinical cases where the outward symptoms were insufficient to enable the inspector to declare the animals diseased. Many of these were unthrifty horses of small value, and suspected of glanders more from association with diseased horses than from the presentation of any definite clinical symptoms. In all these cases the minimum compensation of £2 was allowed.

The subjoined table shows the number of animals attacked with glanders in London and the adjoining counties, together with the total cases for Great Britain during the past twenty years.

Year.	London.	Middlesex.	Essex.	Kent.	Surrey.	Great Britain.	Percentage of London cases
1886	933	30	16	6	11	1114	83¾
1887	1282	50	12	10	11	1482	86
1888	1307	50	21	16	13	1581	82¾
1889	1952	66	23	15	12	2246	86
1890	1563	58	20	7	17	1808	86
1891	2174	81	22	10	24	2435	89
1892	2526	107	40	16	33	3001	84
1893	1619	89	35	21	40	2133	76
1894	982	60	36	16	12	1437	68
1895	1036	109	81	18	23	1594	65
1896	857	52	49	21	27	1294	66
1897	980	73	57	24	20	1629	60
1898	845	94	49	8	9	1385	61
1899	905	77	62	12	20	1472	61½
1900	1387	75	96	39	22	1858	74½
1901	1828	93	119	54	17	2370	77
1902	1604	58	85	36	39	2073	77
1903	1915	118	102	18	52	2499	76½
1904	1869	123	132	26	77	2658	70
1905	1387	97	80	14	48	2068	67
	28,951	1560	1137	387	527	38,137	75

A reduction of nearly 20 per cent. took place in the number of London cases as compared with the previous year, but as the disease has always been subject to fluctuations, it must not be concluded from this decrease that existing powers are effective in combating glanders. The probable explanation may be found in the increased use of mallein as a diagnostic agent. Although a local authority has no power to require its use in detecting latent disease, the Council's inspectors have in many cases induced owners to apply the test to animals that have been in contact with disease. As shown above, 27 per cent. of last years's cases were disclosed by mallein. Obviously in these cases the period of infectivity was shortened, if not eliminated. The veterinary profession are now practically unanimous that the general use of mallein must result in the suppression of glanders.

Almost from the issue of the Glanders Order the Council has been of opinion that its provisions are inadequate, and repeated representations have been made to the Board of Agriculture on the subject, details of which have been given in previous annual reports.

In consequence of the development of motor vehicular traction, the probable dispersal of town studs, with its contingent risk of spreading the disease, has furnished an additional reason for immediately amending the Glanders Order.

The Council is of opinion that the following recommendations of the Departmental Committee appointed in 1899 should be given effect to in any new Order:—

(1) Compulsory notification by veterinary surgeons.
(2) Appointment of veterinary inspectors who are not in private practice as veterinnry surgeons.
(3) Power to deal with in-contact horses; and
(4) Compulsory slaughter of all animals showing clinical symptoms of glanders.

Rabies.

The position as regards this disease is still very satisfactory, no case having occurred in London since 1898. The preventive measures against its reintroduction are still vigorously enforced. The Council's regulations as to the control of dogs made under the Rabies Order of 1895, continue in force. As will be seen by the following table, the number of stray dogs seized shows no diminution. The manner of the disposal of the dogs is also indicated :—

Period.	No. of dogs seized by the police.	No. of dogs claimed at police stations and Dogs' Home.	No. of dogs destroyed or disposed of.	No. of cases in which proceedings had been taken.
March, 1900, to March, 1901	16,982	2095	14,887	2267
March, 1901, to March, 1902	21,568	2487	19,081	2831
April, 1902, to March, 1903	23,346	2511	20,835	2852
April, 1903, to March, 1904	23,947	2448	21,499	2345
April, 1904, to March, 1905	24,020	1949	22,071	1655
April, 1905, to March, 1906	23,732	2151	21,581	1430
Totals ...	133,595	13,641	119,954	13,380

Importation of Dogs.

The Importation of Dogs Order of 1901, framed to prevent the introduction of rabies from abroad, prohibits the landing in Great Britain of dogs from any other country except Ireland, the Channel Islands, or the Isle of Man, whether originally taken from this country or not, unless the licence of the Board of Agriculture has been previously obtained. On landing, the dogs are required to be detained on veterinary surgeon's premises for six calendar months. In certain circumstances special orders are issued by the Board for the removal of imported dogs from veterinary to private premises. Very stringent conditions are imposed in all such cases, one of which is the wearing at all times of specially constructed and sealed harness to admit of easy identification. Seventeen orders relating to the detention of dogs on private premises in London have been issued in the year. Performing dogs are dealt with specially, as they are rarely exposed to danger of infection.

Fifty-nine licences relating to foreign dogs brought to London have been issued during the year, 39 of which were in respect of 207 performing dogs, and the remainder were issued for the detention of dogs at premises under the control of veterinary surgeons.

Swine Fever.

Four outbreaks of this disease have been reported in London during the year, in which the Board of Agriculture ordered the slaughter of 36 swine, which were either diseased or had been exposed to infection. Three of these outbreaks occurred in a comparatively small area.

Anthrax.

Three animals have died from anthrax during the year, viz., two horses and a cow. No positive information as to the source of infection was obtained. In London the disease probably arises from imported oats, and the veterinary inspectors are instructed, as a precautionary measure, to advise owners to have any fodder in their possession destroyed. The cow (which was found dead in the lairs attached to the Islington Meat Market) came from Somersetshire, and the district local authority was informed of the case, in order that steps might be taken for preventing the spread of infection.

The Council is frequently called upon by other local authorities to endeavour to trace and seize the hides of animals sent to London skin markets and tanneries, which have, subsequently to their despatch, been found to have been mixed with skins derived from infected animals, and the inspectors are generally successful in securing either destruction or disinfection.

Epizootic Lymphangitis.

This disease was introdnced into this country by army horses brought from South Africa after the conclusion of the Boer War, and has unfortunately now extended to civilian stables. During the year ten cases have been reported, seven from military and three from private stables.

Exportation of Horses Order.

This Order renders it unlawful to ship from any port in Great Britain any horse which cannot be so conveyed without cruelty during the intended passage, and on landing. This Order also provides for the proper fitting of vessels engaged in this trade, and for the provision of food and water.

The following table shows the number of horses exported from London since the operation of the Order, the number and percentage of animals examined by the Council's inspector, and the number of animals rejected as unfit for shipment :—

Year.	No. of animals exported.	No. of Animals examined by Council's inspector.	Percentage of animals examined.	No. of animals rejected.
1899-00 (15 months)	12,897	11,262	87·0	39
1900-1	9,233	7,325	79·4	52
1901-2	7,185	6,347	88·3	38
1902-3	8,807	7,700	87·4	50
1903-4	8,759	7,843	89·5	53
1904-5	7,082	6,930	97·8	18
1905-6	9,320	8,668	92·9	37

DISEASES OF ANIMALS ACTS 1894 TO 1903. SUMMARY OF RETURNS.

Period.	Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy)		Rabies. Cases Confirmed.		Sheep Scab.	Swine Fever.	
	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Dogs.	Other	Out-breaks	Out-breaks.	Slaugh-tered *
Gt. BRITAIN.* Week ended Oct. 27	16	25			24	85			4	23	165
Corresponding week in 1905 ..	14	17			28	41			18	15	61
Corresponding week in 1904 ..	19	26			30	43			7	11	23
Corresponding week in 1903 ..	9	12			26	51			16	10	39
Total for 43 weeks, 1906	755	1082			918	1739			332	959	5493
Corresponding period in 1905 ..	810	1114			1030	1768			713	680	3044
Corresponding period in 1904 ..	832	1280			1303	2284			1115	1079	5028
Corresponding period in 1903 ..	626	942			1241	2122			1270	1251	6508

Board of Agriculture and Fisheries, Oct. 30. 1906.

IRELAND. Week ended Oct. 20	..	..	..	..	..	..	..	..	3	1	5
Corresponding Week in 1905 ..	..	..	..	..	2	7	..	..	2	..	..
Corresponding Week in 1904 ..	..	..	..	..	1	1	..	..	7	6	139
Corresponding Week in 1903 ..	..	..	..	..	..	..	..	..	8	7	68
Total for 42 weeks, 1906	3	7	..	..	6	14	..	..	184	84	948
Corresponding period in 1905 ..	3	5	..	..	21	71	..	..	245	135	1402
Corresponding period in 1904 ..	3	3	..	..	10	31	..	..	387	295	3942
Corresponding period in 1903 ..	3	10	..	..	3	4	2	..	422	272	3350

Epizootic Lymphangitis: Week ending Jan. 27, 1906, 1 case.

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Oct. 25, 1906.

NOTE.—The figures for the Current Year are approximate only. * As Diseased or Exposed to Infection

DOGS ACT, 1906.

The Board of Agriculture has issued the following to Local Authorities.

I am directed by the Board of Agriculture and Fisheries to ask you to be so good as to call the attention of your Local Authority at an early date to the provisions of the Dogs Act, 1906, which will come into operation on the 1st January next.

2. Section two of the Act empowers the Board to make Orders under the Diseases of Animals Acts for the following purposes:—

(*a*) for prescribing and regulating the wearing by dogs, while in a highway or in a place of public resort, of a collar with the name and address of the owner inscribed on the collar or on a plate or badge attached thereto:

(*b*) with a view to the prevention of worrying of cattle, for preventing dogs or any class of dogs from straying during all or any of the hours between sunset and sunrise: and

(*c*) for authorising a Local Authority to make Regulations for either of these purposes.

The Orders and Regulations will take effect under the Diseases of Animals Act, 1894, and the Orders may provide that any dog in respect of which an offence is being committed against the Orders may be seized and treated as treated as a stray dog.

(3). At the present time the wearing of collars by dogs is in effect enforced in London and several other districts by means of Regulations made under the Rabies Order of 1895, which exempt dogs wearing collars from the requirement of muzzling. In view of the provisions of the new Act, the Board have made an Order entitled the Dogs Order of 1906, of which copies are enclosed, the effect of which is to revoke all existing muzzling Regulations as from the 1st January next, and to enable Local Authorities to make Regulations directly requiring the wearing of collars by dogs while in a highway or place of public resort. The Regulations will not apply to packs of hounds, or to any dog while being used for sporting purposes, or for the capture or destruction of

vermin or for the driving or tending of cattle or sheep. The Local Authorities are empowered to regulate, as well as prescribe, the wearing of collars, and will thus be in a position to extend the exemptions if they think fit. The Order will not come into operation until the 1st January next, but under the Interpretation Act, 1889, (Sec. 37), it is competent for your Local Authority to proceed at once to make Regulations to take effect on or after that date.

4. The Board have not in their Order authorised Local Authorities to make Regulations for preventing dogs from straying between sunset and sunrise, inasmuch as they think that the most convenient method will be for each Local Authority in Great Britain to consider what action is in their opinion necessary as regards their District, and then to state to the Board whether the circumstances render it desirable that these powers should be put in force in their District or in any part of it and whether the restrictions should be in force throughout the year or during a part of the year only.

5. Your Local Authority will note the powers entrusted to the Police under section three of the new Act, as to the seizure of stray dogs. The Board rely on the Police Authorities efficiently exercising these powers, and they have therefore included in the above-mentioned Order a provision revoking, as from the 1st January next, Article 10 of the Rabies Order of 1897 by which your Local Authority were required to exercise functions for a similar purpose.

I am, Sir, Your obedient servant,
T. H. ELLIOTT, *Secretary.*

RATS, FLEAS, AND PLAGUE.

An extra number of *The Journal of Hygiene*, recently published, contains a highly important series of official reports upon the plague investigations which are now being carried out in India, at the cost of the Indian Government, and under the direction of an Advisory Committee, appointed as the outcome of proposals made to the Secretary of State for India, in the latter part of 1904, by the Lister Institute of Preventive Medicine. In consequence of these proposals, the Secretary of State, in January, 1905, placed an annual grant at the disposal of the Committee. The first step taken by this Committee was the appointment of a working Commission to conduct investigations in India; and this Commission has now for eighteen months been conducting its operations at the Plague Research Laboratory, Parel, Bombay. The work of the Commission is being carried on both in Bombay City and in two isolated villages in the Punjab, and attention is for the most part being directed to the epizootic spread of plague among rats, to the precise relationship of the epizootic to the epidemic, and to the modes by which the disease may be communicated from the rat to man. A number of investigations have reached a stage at which it has been considered advisable that they should be made public in the form of preliminary reports, and similar reports will be issued from time to time as materials accumulate.

Among considerations guiding the action of the Commission, and pointing to the directions in which their inquiry should be pursued, it was noted that, apart from the comparatively rare pneumonic form, ordinary plague is not particularly infectious or contagious, and that man-to-man infection plays no important part in the spread of epidemics in India. Plague may, nevertheless, be introduced into a new locality by the agency of man, and for this purpose it is not necessary that the agent should himself be a sufferer from this disease. Definite localities, such as huts or rooms, in which plague has occurred amongst rats and men are, during an epidemic, highly infectious. Persons living or sleeping in such places are liable to contract the disease; although a similar close attendance on a plague case in a hospital or temporary camp is seldom dangerous. The infection clings to the described localities, and with such tenacity that individuals returning to them a month, or in some cases as much as forty-eight days, after they have been evacuated have promptly contracted the disease. In the great majority of instances the outbreak of plague among men is known to have been associated with, and generally to have been preceded by, an epizootic among rats; and there are the strongest reasons for regarding the epizootic as being by far the most important cause of the epidemic spread of the disease. It follows that a knowledge of the causes and modes of spreading of the epizootic may be of the first importance; and it is manifestly possible that infection may be communicated to man either by material deposited by rats upon human food or upon the floors of dwellings, or that some insect which infests the rats, and which will on occasion feed on man, may convey the plague bacillus from one to the other.

Experiments bearing upon these elements of the question are described at considerable length in the reports, and they include a careful anatomical examination of the suctorial apparatus of the flea, an examination from which it appears that the insect, after making and enlarging its skin puncture, injects its saliva into the wound through one channel of its proboscis and withdraws blood through another. As in the case of the leech, the injection of saliva presumably prevents coagulation of the blood with which it mingles, and it may possibly afford a means of introducing the bacilli of plague, although these have not hitherto been detected in the salivary glands of the insect. A general summary of the results shows that the rat flea of India, unlike that of Europe, feeds readily upon the human subject; and also that, at least during the period of seasonal prevalence of plague, it does actually convey the disease from infected to healthy animals. Guinea-pigs allowed to run free in plague-infected houses attracted a large number of flees, mostly rat fleas, and 29 per cent. of these guinea-pigs died of plague; the same results following in houses which had been "disinfected" in the ordinary manner. Fleas transferred from plague-infected rats found dead or dying in the houses were able to transmit plague to healthy animals confined in flea-proof cages. Caged animals were placed in plague houses in pairs, completely protected from soil and contact infection, and equally exposed to aerial infection, but one of each pair protected from fleas and the other not protected. None of the protected animals contracted plague, and several of the unprotected ones died from it; and among the fleas arrested and caught by the protective apparatus a certain proportion were found to contain in their stomachs abundant bacilli identical with plague bacilli. Another series of experiments showed that plague bacilli suffered no diminution of virulence in passing through the bodies of several successive rats, but that many of the Bombay rats were comparatively, at least, insusceptible to the plague virus; a result which may possibly indicate that they had undergone and had recovered from the disease. Another series showed that even grossly infected floors ceased to convey infection to rats and guinea pigs after the lapse of twenty-four hours, and another showed that the blood of infected rats contains an enormous number of plague bacilli, as many as a hundred millions per cubic centimetre having been found before death. It follows that an insect sucking the blood of diseased rats would be likely to imbibe a large number of bacilli, and thus to be abundantly supplied with the means of infecting either other animals or mankind. Finally, the existence of what is described as "chronic" plague has been de-

monstrated in rats caught in previously infected localities during periods of general subsidence of the disease; a condition leading to the inference that plague in an unsuspected form may linger in the rat population, and may again spring into virulence among them under the operation of unknown causes.—*The Times.*

THE YORKSHIRE VETERINARY MEDICAL SOCIETY.

A meeting was held at the Hotel Metropole, Leeds, on Thursday, October 25th, the chair during the first part of the proceedings being occupied by the Retiring President (Mr. A. W. Mason, of Leeds). There were present Messrs. G. C. Barber, H. G. Bowes, F. W. Bartlett, J. Clarkson (Secretary), W. Crawford, W. A. Campbell, S. Chambers, W. S. Clough, Philip Deighton, J. A. Dixon, A. Ellison, J. A. Hodgman, J. Lazenby, J. S. Lloyd, J. McKinna, Herbert Pollard, S. E. Sampson, Frank Somers, C. S. Smith, H. Walpole, George Whitehead, S. Wharam, and Professor Williams, and Mr. William Hunting, of London.

Messages of regret at inability to be present were received from Sir John M'Fadyean, Mr. Abson, Profs. Pritchard, McLauchlan Young, Messrs. Jones, J. E. Scriven (hon. treas.), G. E. Bowman, Cockburn, Schofield, Wragg, and Bartram.

Non-Experts as Expert Witnesses.

The Secretary read the circular letter from the Solicitor to the Royal College of Veterinary Surgeons (Mr. George Thatcher), containing a request that particulars of any cases on the point, which had come before any members of the Society, might be forwarded to him as soon as possible. Full details should be given stating dates, names, and places for the guidance of the committee on the understanding that there will be no publications of them without the consent of the informant.

The President assumed that members had read in *The Veterinary Record* what the Council of the Royal College thought of the subject.

On the proposition of Mr. Lloyd, and seconded by Mr. Crawford, the communication was left in the hands of the Council of the Society.

Election of Officers.

The President said the Council had approached a gentleman with the view of his accepting the Presidency for the ensuing year and he had consented to stand. The gentleman in question took a great interest in the Society, was a member of the Council of the Royal College, and took a deep interest in the veterinary profession. He referred to Mr. McKinna, whom he had great pleasure in proposing as their new President. (Applause).

Mr. Frank Somers, in seconding, felt confident that Mr. McKinna would make a good President and would fill the chair in a dignified manner.

No other name was submitted, and the resolution was carried unanimously.

Mr. McKinna, who was heartily applauded on taking the chair, said he was deeply sensible of the great honour which had been conferred upon him, and only hoped that he might be able to live up to the traditions of the presidency of a Society which held a very prominent place in their professional life, and that at the end of his year of office the members would have no occasion of regret at having elected him. He thanked them for their unanimous vote.

Vice-Presidents.—As ex-President, Mr. Mason becomes a vice-president for a year. Mr. Wharam and Mr. Ellison were elected, the resolutions being moved and seconded by Mr. McCarmick, Mr. Bowes, Mr. Dixon and Mr. Walpole.

Hon. Treasurer.—Mr. Mason, in proposing the re-election of Mr. Scriven, observed that that was the first occasion he remembered their old friend and colleague to be absent from a meeting of the Society. The cause of his absence was a serious illness from which they all hoped he would soon recover. He suggested that the Secretary should write a letter to Mr. Scriven conveying their sympathy with him in his illness and the sincere hope that he would very soon be better and among them again.

Mr. Wharam seconded, indorsing the reference to Mr. Scriven's illness. The resolution was carried.

Hon. Secretary.—Mr. Mason, speaking as a past president, said that they could not do without Mr. Clarkson, who was an ideal secretary, and whose re-election he had the greatest pleasure in proposing.

The President seconded, expressing the feeling that it was an honour to be associated with Mr. Clarkson.

The resolution was passed with acclamation, and Mr. Clarkson briefly acknowledged the compliment.

Auditors.—Mr. Bowes and Mr. Crawford, on the proposition of Mr. Lloyd and Mr. McCarmick, were chosen as auditors, the former being re-elected.

Council.—The President and other office bearers and the following six gentlemen: Messrs. Bowman, Chambers, Clough, McCarmick, Hallilay, and Whitehead.

New Members.

Mr. Johns, of Selby, was nominated by Mr. Deighton.

Mr. Woodrow, of Swinefleet, was nominated by Mr. Crawford.

On the motion of Mr. Mason, and seconded by Mr. Lazenby, the Treasurer's balance-sheet, which showed a balance of £30 8s. 8d. in the bank was received, and on the motion of Mr. Wharam, and seconded by Mr. Bowes it was adopted.

The Proposed Registration Fee.

The Secretary reported that the Council had considered the resolution of Major Butler that "The Royal College of Veterinary Surgeons be invited to consider the advisability of imposing an annual registration fee." The Council recommended the Society to support the resolution, and this recommendation was agreed to on the motion of Mr. Clough, seconded by Mr. Mason.

The Board of Agriculture and Veterinarians.

Mr. Mason reported the result of an interview with the Secretary of the Board of Agriculture (Sir Thomas Elliott) on the question of the appointment of Medical Officers of Health as Inspectors under the Diseases of Animals Act. As representing the Yorkshire Society, he joined a deputation from the Royal College, consisting of the President, Mr. Simpson, and the Secretary. He said the deputation were received with the greatest courtesy, and Sir Thomas Elliott, as they would have seen from the report in *The Veterinary Record*, expressed sympathy, to a large extent, with the views laid before him. His concluding words were to the effect that the Board would, whenever it be possible, be used to secure to veterinary inspectors the full privileges to which they were entitled, and the full credit for the work which they carried out under the Act.

Parliamentary Representation.

Another report from Mr. Mason had reference to a meeting in London, on October 3rd, in regard to the desirability of the veterinary profession being represented in the House of Commons. It was a long and interesting meeting, but he confessed that he had never attended a meeting of his own profession, where gentlemen had so many conflicting ideas as to the raising of

ways and means. "We made resolutions and rescinded them in a few minutes. We made further resolutions, and I speak quite advisedly when I say that the delegates when they left the room were about as wise as when they went in."

The meeting was agreed as to the desirability of direct or indirect representation. He held in his hand a letter in regard to the resolutions put forward, but, unfortunately, it was marked "confidential." Meanwhile, he might say that the writer said "the resolutions, which were all mixed up, would be published sooner or later." The sooner the better, for until they were published he could not say with absolute certainty what really did happen. One of the tangible things which took place was a request by the Lancashire Association, which had been very good in finding means up to now, that the different societies should each make a grant of a guinea each towards the preliminary expenses incurred. He proposed that the Yorkshire Society should contribute that sum as their quota. (Hear, hear.)

Mr. CHAMBERS seconded and the resolution was adopted.

Professor WILLIAMS said his was among the confusion of voices, and probably it assisted in making the confusion greater, but the meeting did come to a determination, after many points had been discussed by those who enjoyed quibbling with one another. It was really play with very sharp tools between certain members of the profession who were learned in the law and such matters, but coming to the serious part of the business the meeting favoured the idea of having, if they could, a Member of the veterinary profession in the House of Commons. The question was also discussed of having a lobbyist. It was decided to at once raise by means of a Committee that were appointed a sum of £500 towards the initial expenses of whichever scheme it was found best to adopt. He wished to explain, for the benefit of those interested in having a direct Parliamentary representative, that at first he did not think it was advisable to have a member of the veterinary profession in the House of Commons, and that was why, in Manchester, he added a rider to the original proposition that they should have direct or indirect representation. He was glad he did so, because it kept the question open. There was no doubt whatever that they must be represented if they were going to maintain their rights and privileges. There was certain to be introduced in Parliament, within a short time, a new Public Health Act for England. Unfortunately, in England the veterinary profession was, so far as recognition by the authorities, in a worse position than in Scotland. He had written to a Member of Parliament, a friend of his and in a Government position, seeking his advice and assistance in regard to both the direct and indirect representation of the profession, and telling him that, according to his view, they could not very well get direct representation. He was very much surprised to receive a reply that the Member saw no great difficulty in their having a member of the veterinary profession sitting in the House of Commons, if the profession were cordial and united in putting him through. It was a good augury when a man in an official position made a statement of the kind indicated. He hoped all would assist in getting Parliamentary representation. There would be a bitter fight between veterinarians and the medical profession as to what the former considered their rights and privileges in connection with certain matters, more particularly meat inspection. The medical profession had the ear of the Local Government Board at the present time.

The PRESIDENT pointed out that an apparent great difficulty in carrying out the scheme outlined was the difference in politic. To succeed they would have to sink their own individual political opinions. He had heard the questi n discussed over and over again, with the concluding comment that "if the candidate or member is not of my way of thinking I will not give a brass farthing."

Mr. MASON agreed with Prof. Williams' impressions of the London conference, and said he was induced to make the remarks he had from the fact that, in answer to a request, the gentleman who had been appointed Secretary forwarded him copies of the resolutions, but asked him not to make them known, as he was not absolutely certain whether they were correct. (Laughter)

Votes of thanks were accorded to Mr. Mason for waiting on the President of the Board of Agriculture, and for attending the Conference *re* Parliamentary representation.

SOME MISTAKES AND THEIR LESSONS.

Address by W. HUNTING, F.R.C.V.S.

Mr. HUNTING said he supposed the chief reason of the existence of veterinary medical societies was for the interchange of opinion, so that they might help to enlighten and warn each other. He believed that nothing taught a man more than a mistake, and he supposed he should not be far wrong in saying that they all made mistakes. (Hear, hear.) There was a nasty little proverb which said "Experience is a hard master, but fools will learn from no other." He applied that to himself and not to his hearers. (Laughter.) It had occurred to him that if he strung together one or two little cases of mistakes that had been made—he would leave them to guess who made them—and if each one in the room gave an honest account of the mistakes which he had committed, they would finish at midnight very much wiser. (Applause.)

The first matter that he desired to refer to was a case which taught him to be careful of half an examination, even when that was all which was required of him. A man said to him, "I want you to examine a horse. You need not examine his wind, I'm satisfied with that.' Yes, he remembered the case of a good-looking chestnut horse. The owner had had the animal off work for about eight months, hoping against hope that he would be again a useful horse. He found that the horse would not become so, and he made up his mind to sell him and take anything for him. A dealer came along and offered £30 for the horse, and a sale was effected. The new owner took his purchase a little distance and was offered £80, but he refused it. He took it home. The animal was examined by a veterinary surgeon, who looked him over and trotted him, and passed him as sound, wind not being in consideration at all. The horse was sold and taken out by train about twelve miles. There was a telegram the same night to the dealer to send for the horse, which was described as a brute. The dealer telegraphed in reply and went out next morning and met the owner, who was anything but civil. The purchaser complained that he had never seen such a lame horse before; it was an old thing, and he was surprised that it had been sold to him. They went to the stable and pulled the horse out. He was trotted about, but he was sound. The owner apologised, and the dealer went back. Next day, however, there was another telegram, the purchaser this time insisting upon the horse being returned. It was a case of embolism in the hind leg. How could a man avoid passing a thing of that kind if he examined it in a hurry and did not exercise it sufficiently? You very rarely come across such a case, but it is wonderful how you not only fall into a trap, but also into a trap not laid for you.

Once he was asked by a veterinary surgeon to go and examine a cart horse. After doing all that he thought was necessary he said that he could not find anything wrong with him. The veterinary surgeon inquired, "Will you give a certificate?" and he replied, "Yes."

There came the rejoinder, "You had better see him in harness before you do." The horse was accordingly harnessed, and after he had gone some distance he was so lame that he could not move his fore legs at all. He came to a standstill. They took him out of harness, and he trotted in hand as sound as any horse could. He (Mr. Hunting) had never discovered what it was that lamed him, but it had something to do with the collar.

Another matter which he wished to emphasise was "Don't treat your client as you would a professional man; don't go into details with him." Some of them, in talking to a client, forgot that they were only talking to a man who had no interest in the veterinary profession and did not understand it. Once examining a horse he entered into details of the case with the owner, observing that he knew there was a fractured pelvis, but that he did not know where. He was surprised to be pulled up by the owner saying that he would get someone who did. The horse was treated for some time and was poleaxed, under the idea that he had a fractured ilium, whereas it was a fracture of the ischium.

The next point is—"Don't believe a farrier when you can examine a foot yourself." In this connection he recalled that many years ago he examined a pair of ponies for an old gentleman and passed them as sound. He said, as he finished the examination, "Some one has put the budding iron on one of the hocks, bnt I don't know why. I cannot find any spavin." The groom replied, "You had better mention it in the certificate, as the governor is very particular." He quite forgot it, and gave a clean certificate. Imagine his disgust four days later to find that the pony was lame, and lame, too, on the leg which had been touched. He felt extremely small, and did not know how to get out of it. He noticed that the ponies had been newly-shod, the shoeing having taken place in his forge. He asked his foreman whether there had been anything wrong, and he answered that they had had the shoe off again, but that there was not anything wrong about it. Another veterinary surgeon was called in, and he advised a three months rest and firing. He (the speaker) had recommended three day's rest and a cold water bandage, more with hope than expectation. The pony was sound in three days. He thought how clever he was, and what a fool the other veterinary surgeon was, but he told the tale too often. He repeated it in the hearing of his foreman a couple of years after the event. The foreman, with a curious expression on his face, said, "I heard you tell that story about Dashwood's ponies. The fact is, Bill (a fellow-workman) pricked the pony, but I knew it would not be a bad job, and so I said nothing." (Laughter.)

Sometime ago he remembered giving evidence in a court of law as to a shiverer. He gave evidence that that shiverer must have been affected the day previously, *i.e.*, the day of sale, and he could imagine the veterinary surgeon who had passed him feeling annoyed that an opinion should be pitted against his statement of fact. Since then he had known more than one case where a horse was so sound that no one could say there was anything wrong with him before a railway journey, but at the end of it he was a shiverer.

There were apparent differences of opinion which arose simply and solely from the use of words which had a different significance to different people. In cruelty cases a veterinary surgeon went into the box and said that a horse had a ringbone. Another veterinarian was examined, and swore positively that the animal had not. As a rule, opposing parties looked upon one another as rogues or fools—at any rate they failed to understand how a man could differ as to whether the animal had a ringbone. When they got at the bottom of the difference it amounted to this. They did not agree as to what ringbone was. So long as the profession allowed definitions to be jumbled up, so long would they be blamed by the public generally for differing in opinion over something which was perfectly definite. He took it that ringbone ought to be properly defined, and that they ought to agree as to what they meant by the word. Personally, he urged that the word ought not to be used, except in the case of ossific disease which implicated a joint. Nearly all owners and dealers had an idea that ringbone was a serious thing. Veterinary surgeons knew that an injury which implicated a joint was a serious thing, whereas a little enlargement on each side of the pastern bone was a very common occurrence, unaccompanied by lameness in 90 cases out of 100.

They were familiar with the adage, "There is an exception to every rule," but would probably agree that it might almost be put down as a rule, "Once a roarer, always a roarer." At one time he should have believed this, and he should have believed that if a roarer made a noise on Monday he would do so on Tuesday or any following day, but he personally knew a case where a mare was bought at Tattersall's with a warranty as a "good hunter." The veterinary surgeon said to the purchaser, "You had better let me gallop her to-morrow morning to see if the warranty is correct, because a warranty is not always correct, even at Tattersall's." The purchaser said he would try the mare himself, and he rode her some days—beyond the time that the animal could be returned. He then discovered one morning that she made an "awful noise." His (Mr. Hunting's) partner said he would lend the owner a horse on the following morning, and would ride the recently purchased hunter himself. They rode in the park together, and galloped sufficiently to bring out most noises, but there was not a sound. The mare was ridden for three or four more days, but she made no noise. Then a morning arrived when, as soon as she touched the sand on the Row, she started to roar like a bull.

"One swallow does not make a summer," nor did one symptom afford a diagnosis. He used to think that in some cases it did. There was a time when he used to diagnose hydrothorax by looking over the door. He remembered a case he followed to the knacker's yard, and the surprise he felt on discovering, not a case of hydrothorax as he had supposed, but of double-pneumonia. He pointed out that all the laboured work of the chest in hydrothorax and double pneumonia was an attempt to put air into the lungs, and that both obstructions produced similar methods of breathing.

A paralysed lower jaw in a dog was of such significance that it usually led to extinction as soon as possible. In his own practice it meant nothing less than rabies, until one day his own dog returned home from the park with a paralysed lower jaw. They looked at the dog suspiciously; he seemed quiet, and they ventured to tie him up. As soon as he could make it convenient he had the animal put into a big iron cage and watched. Later in the day he met a man, who said, "Was that old dog of yours out in the Park this morning? Is he all right?" He replied, "No, he's not." The man then said, "I thought he could not be, for I saw a boy throw something at him and knock him over." The dog had been hit with a stone just under the ear. In a few days, without any treatment, the dog was all right.

Look for the obvious first. It was a common thing for them to everlook the obvious. They wanted to find something extraordinary, and the obvious was overlooked. He once knew two veterinary surgeons who met over a lame horse. They examined him, and were rather surprised they could get no crepitus. Then one of them said, "We had better have a look at his feet." They did so, and found a big nail right through the frog. They ought to have looked at the foot earlier. This, he supposed, was shocking stupidity, but it illustrated the advisability of looking for the obvious first.

Another little warning. Be cautious in anticipating lesions when going to a post mortem with the owner. He had had a case of colic, the animal lived three days and he treated it as a case of impacted colon. After the death of the horse the owner spoke to him about a previous case which he had had, inquiring "Do you think this is anything like the last case?" which was a twisted large intestine, he replied "No, this horse's intestine will be full of solid matter but not twisted." The large intestine was full of fluid, and twisted upon itself. It was foolish of him to enter into any details with the owner.

On the subject of twists we should like to ask if there was anyone in the room who could diagnose or distinguish between a twisted small intestine and a twisted large intestine. He had been wrong so often that in future if he had got to say what it was, he should say it was a twisted small intestine but only because it occurred twenty times more often than the other.

He was not there to teach tact, but he should like to finish his address by relating a case showing how a ready answer concealed error. A client (a doctor) said to a friend of his (a veterinary surgeon) that he had never seen a horse unnerved but that he should like to see it done when his horse was operated on. The veterinary surgeon said "You be there at noon on Wednesday and you shall see it." The doctor failed to put in an appearance and the veterinary surgeon commenced his work. He had just got the first nerve divided when the doctor arrived, exclaiming "Good gracious, you are doing the wrong leg." The operator answered "Do you think I am a fool?" The doctor observed "No, of course not, but you are doing the wrong leg." The operator replied "You, as a doctor, ought to know better. How do you think a horse would go if he were unnerved on one leg and not on the other." "I beg your pardon," rejoined the doctor, I didn't think about that." (Laughter and Applause.)

Discussion.

The President, in inviting discussion, observed that he had learned more from his failures than from his successes.

Mr. A. W. Mason said that, first of all, he must thank his friend, Mr. Hunting, for coming down to Leeds, at his invitation, and giving them such an interesting and facetious address. There was no doubt that Mr. Hunting, like many of them, had learned a great deal from errors made. Errors, he might say, were multitudinous and outnumbered their successes. If he recounted the mistakes that he had committed he might keep them till to-morrow. One or two would have to suffice. A hunter, which belonged to his daughter, had lost a shoe, it was rested and treated for a sore foot. Instructions were given to feed fairly well, but the owner pleaded that it should not be got too much out of condition, because she wanted to hunt it as soon as was possible. The shoe was put on and, apparently, the horse was in the course of time fit to hunt. It was taken about 1½ miles when it went lame and sweated profusely. Eventually it was walked home and treated for azoturia. He called in a brother practitioner, Mr. Bowes, who agreed with his diagnosis. The animal eventually died, and when the post-mortem examination was made they became very learned. The horse had a ruptured stomach, the rupture being about the size of the end of his little finger. It had died from peritonitis. Many years ago he remembered being called out late at night to a case, and describing it as one of lung complications. Next morning it was a case of laminitis.

Mr. Chambers: Mr. Hunting had remarked that he did not know of many cases of twisted bowels where the horses were off work. He and his partner had had half-a-dozen cases where the animals had never been out of the stables.

Prof. Williams confessed that he was not at all sure about the mistakes that he had made in his lifetime, but pointed out how errors might be made by oversanguine men in diagnosing, particularly where the horse was lame from spavin or ringbone. In many cases of hock lameness there was no disease. It was advisable never to be absolutely certain at first. One of several interesting cases mentioned by the Professor was the following: He was called out at night to go to some brick works in Scotland to see a pony which was very ill. He went and thought that the pony, who was sitting on his haunches, would die before he could do anything for it. He was always taught to give something at once, if only to make the bill bigger and to show that attention was being paid to the patient. (Laughter.) Before going away he left word that he should be sent for if necessary. Next morning he went to the place but could not find the pony, and concluded that it had died and had been removed. Judge of his surprise on presently being told that the animal had been working all morning. (Laughter.)

Mr. Garnett: The purport of a letter sent to a veterinary surgeon was an instruction to examine a horse which the writer had bought, subject to the animal being passed as sound. The horse went as badly as anything could, but the veterinary surgeon, try as he would, could not find out that he was unsound in any respect. The animal was bought, and within a fortnight or so there was a terrible to do. The horse backed and sweated himself, and would not do at all. The veterinary surgeon happened to be away, and another practitioner was called in. The veterinary surgeon had not been consulted by that client since. (Laughter.)

Mr. Bowes thought that, perhaps, the most common mistake which they were liable to make, particularly in towns, was that of trusting to the farrier in lameness. Success in life, as a veterinary surgeon, seemed, he humorously added, to depend more upon the capacity or ability of explaining and covering up their mistakes than on their ability as practitioners.

Mr. Clarkson said that one of the chief causes of mistakes—he did not say in every instance—was hurry. Like preceding speakers, Mr. Clarkson had a case. It occurred at Rothwell, near Leeds, many years ago, the patient being a horse of good age, which was able to walk ten yards, and then drop on his knees. The muscles were very much wasted. He used stimulants locally and strychnine internally, hoping or thinking that the animal had some nervous complaint. In course of time, the owner became tired of the treatment and it was removed to Alverthorpe to be killed. There was a blind man in the yard, and, as sightless men often did, he said, "Let's see it." He stroked the animal, observing that it had got cold and should be given a dose of saltpetre and wine. That horse got well.

Mr. Dixon put in a plea on behalf of the younger practitioners. He explained that when one of them was called in he had to say something, and it led him to make mistakes. Old practitioners, particularly men with established reputations, should be guarded in what they said to their clients. If, when in doubt, they said, "I don't know, but will see the case again," it would be a good thing for young practitioners.

Mr. Bowes remarked that in London, as in big provincial cities like Leeds, there was no doubt a considerable number of deaths from twisted intestines, large and small. He was of opinion that if a horse lived three days there was not likely to be any twist, and he was equally of opinion that a horse with a twisted large intestine would live considerably longer than that.

Mr. Wharam recalled Shakespeare's words, "Best men are oft moulded out of faults," and said he believed

that the bulk of his experience had been gained from his mistakes. In bowel diseases he never gave anything but a guarded opinion. Sometimes one was inclined to think that the ailment was one thing, and at another time that it was something else. It was always advisable, therefore, to give a guarded opinion. He had a case which seemed like impaction of the large bowel, but it was a twist, and the animal lived 8½ days. He had benefitted from an early experience. After some trouble a calf was got away, and the cow seemed to be going on allright. The owner fetched him again, saying that the cow was very bad. The explanation was that she had another calf undropped.

A valuable hunter was lame on one of his hind legs. One day he noticed an oozing at the heel. They had been fomenting and rubbing the hock and had located the lameness there. Aft r cutting away a good deal of the foot they came across a short piece of hard wood, a piece of the root of a tree, well embedded. Eventually they got the horse better.

Mr. FRANK SOMERS said it was refreshing to have these candid confessions. He possessed an old book, entitled "The Confessions of a horse dealer," and thought that if a book could possibly be written on "The Confessisons of a Veterinary Surgeon" it would prove very interesting. None of them were infallible. No one could follow his profession day by day without making mistakes. He was sure they would benefit from that afternoon's discussion.

At the end of the discussion a very hearty vote of thanks was passed to Mr. Hunting, the reason being submitted by the President and seconded by Mr. Mason, who urged that veterinary surgeons ought to make up their minds as to what ringbone was and what it was not (hear, hear).

Mr. HUNTING, in reply, said that someone had asked how it arose that they made mistakes. He could not answer for all; he knew why he made his mistakes, because he did not know any better. There were some cases where, even with a post mortem, they had failed to find the cause or to understand the condition. There were some cases in which they might safely say that they really did not know (applause).

THE NEW LIBRARY.

The PRESIDENT announced that books had been presented to the newly-formed library by Prof. Williams, Mr. Bowes and Mr. Wharam (a joint gift) and Mr. Mason, while Mr. Pollard had given a set of trephining instruments to the Society.

The donors were warmly thanked Mr. Wharam reminded members that Mr. Bowes was the hon. librarian, and would be glad to receive further gifts of books and instruments. It was intended to purchase a sectional bookcase, adding to it as occasion required.

VOTES OF THANKS.

On the motion of the PRESIDENT, and seconded by Mr. SOMERS, the retiring President and other office bearers were heartily thanked for their services. A similar compliment was paid to the President for presiding, the resolution being moved by Prof. Williams.

At the end of the proceedings, those present were entertained to tea in the hotel by the Leeds members of the Society.

THE WALLEY MEMORIAL PRIZE COMPETITION.

Examinations were held simultaneously in London and Dublin, on Saturday, the 6th October.

The Prize has been awarded to No. 2, viz., Mr. S. J. MOTTON, Student of the Royal Veterinary College, Camden Town, N.W.

Royal College of Veterinary Surgeons.
October 30.

"Physic in Fiction."

A large company, that included many ladies, made acquaintance with the Mayor-elect of Brighton, Councillor Gervis, M.A., M.B., in the *rôle* of lecturer, at the Hotel Métropole. Under the auspices of the Brighton Association of Pharmacy he delivered a most entertaining review of the part played by "Physic in Fiction." To Mr. W. H. Gibson, F.C.S., the President of the Association, fell the pleasure of introducing Councillor Gervis. He did so in an admirable little speech. The subject of the lecture, he said, was dear to the hearts of many in the room, and they would doubtless go away with an ardent desire to physic everyone they met. (Laughter.) The Mayor-elect was an enthusiastic admirer of the charms of Brighton, and years ago in that same hotel he gave to the members of the Pharmaceutical Conference a famous prescription—pure air, and Brighton sunshine intermittently mixed in very large qu ntities. The members went away greatly benefitted, and chanting the praises of the famous Brighton physician.

Councillor Gervis, who had an enthusiastic welcome, gave to his lecture a wide scope that covered much more ground than "Physic in Fiction" might suggest. At the very outset he extended the limits of the title to the field of patent medicine advertising in newspapers, and amused his audience with the result of an analysis he had made of twelve different kinds of pills. It did not mean that the pills were bad because they were merely composed of the cheapest and simplest drugs, but the statement that they were evolved after great labour by eminent scientists was bordering on the fictitious. When it was claimed that a pill of aloes and soap would cure half a column of ills, the advertiser was guilty of a "terminological inexactitude." (Laughter.) He also tilted at the innocent blunders of newspapers in the description of accidents and injuries, and offered a serious word of caution to the Press of the country as to the great responsibility of publishing reports of cures in cases of cancer, for which no cure had yet been discovered. Turning to the novelists and dramatists, he amusingly hit off their mistakes and exaggerations, and incidentally commented that French writers were much more free from mistakes than English writers. Flaubert in "Madame Bovary" gave a marvellously accurate description of the effect of arsenic poisoning. Zola was also often remarkably accurate.

CHANGES OF FASHION.

Novelists afforded a valuable insight into the diseases prevalent in their day. In the early Victorian books the ladies always fainted, probably because they stayed indoors working at those wonderful samplers. Unhappy love affairs always ended in a decline. Nowadays the ladies in similar cases become hospital nurses, or started horticultural institutes, or became suffragettes. Heroines were often anæmic in the early books. Even Shakespeare made Juliet anæmic. Typhus fever had gone from the modern novel; and small-pox and the dread of it, disappeared from fiction, with the advance of vaccination. Councillor Gervis poked fun at the diseases which were peculiar to novelists. Brain fever was the creation of the fevered brain of the novelist; and under its delirious influence the villiain was apt to make lucid confessions of his misdeeds. His own experience was that delirium never permitted connected speech. If there were any villians in the room, they might take comfort. He was equally amusing about the liberties taken with the skull, which was broken, in books, with one tap of a walking stick. He had tried experiments on the human skull—post-mortem, he hastened to add—and was astonished to find the force it took to produce a fracture. The hunting field was made as fatal as a

field of battle, though in seven years' practice in the centre of a hunting country he had only experienced one fatal accident.

PEN PORTRAITS OF DOCTORS.

In one of many transitions from gay to grave the lecturer emphasised the exaggeration of death-bed scenes, and again quoting Shakespeare, declared the description of the death of Falstaff in "Henry V.," to be the most accurate record he had been able to find in fiction. Another interesting phase of the lecture dealt with the novelist's picture of the medical practitioner. Le Sage's brilliant satire of a doctor in "The Adventures of Gil Blas," and Molière's delightful burlesque of the examination of a medical student in "Le Malade Imaginaire," were quoted as humerous portraits, but Dickens had given delightful sketches of all sorts of medical men. "It always puzzles me," said Councillor Gervis, "to know why we want other novels when we have Dickens. He is absolutely true to life, and if people say he caricatured, it is they who are lacking in perception." The old saying that "doctors differ" was a fine subject for the satirist, but it ought to be the proudest boast of the profession, because it meant that medicine was a progressive science that was constantly being advanced by fresh research. In conclusion, he volunteered the opinion that the most universal characteristic of medical men was the kindly tolerance that sometimes made them the despair of stern moralists and enthusiastic reformers. Shakespeare had realised this quality, and expressed it beautifully in "Macbeth," a passage from which tragedy he quoted as a fitting close to a most enjoyable lecture.

Councillor Gervis was heartily thanked, on the proposition of Mr. J. R. Gwatkin, seconded by Mr. C. E. Robinson, and endorsed by the President, who hoped the Mayor-elect might be induced, after his year of office, to lecture to them again, possibly on "Fiction in Physic."—*Sussex Daily News.*

Action.—A Horse's Age.

William Beggs, Sherrygroom, brought an action against James M'Nally, Killywoolghan, for £5 breach of warranty in a horse. Mr. W. J. Irwin, for plaintiff, and Mr. John Corr for defendant.

Plaintiff swore that in September, 1904, he bought a horse in Moy fair for £23 from defendant. He was described as a "coming four year old." The horse proved not to be a four year old, and when witness spoke to defendant in the presence of Bob Farrell, who was present at the sale, he said he sold the horse for a three year old. Farrell said that defendant sold the horse for a four year old. Defendant then said, "Well, he is that yet." Last year his (witness's) solicitor wrote defendant threatening an action, and one day in witness's absence defendant doctored the horse and had his mouth bleeding and had his teeth filed down. When witness came across from the harvest field M'Nally said if the horse was not then five year old he was "open" (to an action). Whatever M'Nally had done to the horse's mouth the animal would not let witness near him. It was a loss to witness as he put the horse to heavier work than he would have put a three year old to. There was a big difference in the price of a three year old and a four year old.

To Mr. Corr: He had not tried to sell the horse yet. A vet. could prove he was not the age.

Robert Farrell gave corroborative evidence as to sale.

William Sinclair Davis swore that he had been called in to see the horse last year as the time of the dispute. The horse's mouth then seemed to be tampered with. The horse was now a "four off."

To Mr. Corr: Witness could not say who interfered with the horse in Beggs' field.

Thomas Best swore that at the time of the dispute about the horse's age M'Nally suggested to Beggs that he should take a spoon and knock his teeth off, and said if he was near him he would soon do it. (Laughter.)

To Mr. Corr: Witness knew nothing about horse's ages.

Wm. Watson, V.S., swore that the horse still had the milk teeth. The horse was only four years old off, and would not bring the same price as a five year old.

John Meikle, V.S., was produced, but His Honour would not hear him, as (according to His Honour) he did not kiss the book.

Mr. Irwin said he had kissed the book, but His Honour refused to hear the witness.

James M'Nally, the defendant, swore that at the sale he told Beggs that the animal was a late foal—foaled in August, and told him that he was three years old and three days. When the dispute about the age arose he visited Begg's place, but did not doctor the horse's teeth, but caught him with a halter and opened his mouth to see his teeth. He then told Beggs that the horse was a "natural" four years old."

To Mr. Irwin: The horse was foaled in Westmeath, and witness had the breeder's guarantee of age. The milk teeth were "sit fasts." He had no knife nor spoon to force the animal's teeth.

His Honour: Isn't a horse a year old when he is borne? (Laughter.)

Mr. Mullan, solicitor: That is so about racing horses, certainly.

His Honour said the case had stood over from 1904. He dismissed the case.

Mr. Corr said he had five witnesses' expenses, including a V.S.

His Honour said he would give £1 expenses.—*The Dungannon News.*

A Judge on a Doctor.

Extraordinary evidence was given in the Southwark County Court during the hearing of a claim by Ellen Rolt, a young machinist, against the Specialist Press, Limited, of Plough Court, E.C., for £125 damages under the Employers' Liability Act for injury to the middle finger of the left hand. The girl was at work on a binding machine, when by reason of an alleged defect in the machine the needle penetrated her finger, and a piece of steel which broke off in the flesh had to be extracted.

A specialist called for Miss Rolt said that as a result of the injury the finger had been lengthened by five-eighths of an inch, and would be permanently stiff. He knew of a case in which a man had one leg lengthened by two-and-a-half inches by an injury to the limb.

The plaintiff's private medical adviser, Dr. Judge, corroborated the specialist as to the increased length of the finger, and in cross-examination indignantly denied that he worked hand-in-glove with a solicitor.

Counsel: Did you never tell the defendant's doctor that you sent all your accident cases to a certain solicitor, and the lawyer sent all his medical cases to you?—No.

Did not you say, 'I scratch his back, and he scratches mine'? (Laughter)—No; I am surprised at a man in the profession making up such a thing.

A house surgeon from St. Bartholomew's, called by the defendant, emphatically declared that the finger was not lengthened. It had been unskilfully bound up, and in consequence had become thinner, and looked longer. It was an optical illusion.

Counsel: Do you suggest it is an optical delusion on the part of the specialist who has measured it, and finds the difference five-eighths of an inch?—I regret to say I can come to no other conclusion.

Continuing, the doctor said the plaintiff only imagined that she could not now use her finger. She had acted on "suggestion" that she could not use the finger, and while she remained in that state of mind she would refuse to use it.

Counsel: She says she feels pain in the finger. What is there to cause her pain?—Suggestion, hysteria, or fear.

Another doctor stated that the girl's pain was only "suggestive," because she cried out when he looked at the finger, and before he attempted to touch it.

The jury found for the defendant, but Miss Rolt was subsequently awarded one guinea under the Workmen's Compensation Act.

"The present condition of the girl's finger," observed Judge Layman, "was caused by the treatment of the injury, and I feel bound to say it has been so treated in order to make a case. Had she continued under the hospital treatment, there would have been nothing to try."

REVIEW.

The Surgical Anatomy of the Horse.

We have received from the publishers the first volume of this work by Prof. Share-Jones. It is something quite new in veterinary literature and fills a gap which has long required attention from our writers. The title suggests a book of dry reading, but it might just as well have been "Anatomical Surgery" as "Surgical Anatomy," because the surgical conditions are so blended with the anatomy, and both so well illustrated, that we have a readable and interesting surgical work.

The Professor in his preface modestly says, "In submitting this work to the judgment of his fellow veterinarians, the author does so fully conscious of its numerous imperfections. Nevertheless he hopes it may prove to the busy practitioner a handy means of revising the anatomy of the seats of the common operations, and to the student a ready aid in the application of his anatomical knowledge to the study and practice of surgery." We have no hesitation in expressing our opinion that to both practitioner and student the book will verify the author's hopes. The dry anatomy taught to students, too often partially learned, has contributed very little to surgery, and so it is that the majority of practitioners of operative surgery are able to boast more of their boldness than their exactness Prof. Share-Jones only claims that he has afforded help in "common operations," we believe that his finished work will enable any average practitioner to successfully attempt any operation he may consider expedient.

This volume is devoted to the Head and Neck, and affords descriptions, verbal and pictorial, of the mouth, teeth, tongue, œsophagus, larynx, trachea, gutteral pouches, sinuses, eye and ear. It also treats of the surgery of all these parts, briefly but lucidly.

There are seven coloured plates and twenty-six half-tone plates which make so clear the relations of parts that we only fear some readers may be induced to attempt surgical operations too rashly.

When this work is completed Prof. Share-Jones will have earned the thanks of the profession for a contribution to its literature long wanted. The student will be able to rationally connect his knowledge of anatomy with his study of surgery and the practitioner will possess a guide to operative work, the absence of which all of us have felt and regretted.

The publishers are Messrs. Williams & Norgate, Henrietta Street, London, and they have produced the work in the first class style their old reputation would lead us to expect.

"1876—1906."

In certain contingencies the Veterinary Staff of the Board of Agriculture (with a few exceptions) will be "requested to resign at the age of forty-five."

A health to the days, not so very long past,
When life ran on easy lines,
With the ha'penny Press in the womb of Time,
As were "Motors," and "Great Combines."
Then a man *retired* to well earned rest—
Not (under compulsion) "resigns."

Even now, if you get to the *Front*, you're right
(If only, when there, you can *stay*).
But what of the hopeless horde behind,
And their stuggles from day to day—
The hearts that are broken, the good men gone down,
In the bitterness of the fray?

Hide-bound Fossil.

Personal.

Dear Sir,

Will you be good enough to permit me, in the columns of your valuable journal, to tender my sincere thanks to the many members of the profession who have so kindly written to me expressing their regret at my resignation as Secretary to the Royal College of Veterinary Surgeons. As I may have omitted to reply to some, I wish to publicly acknowledge their kind expressions of friendship and good will.

Arthur W. Hill.

Royal College of Veterinary Surgeons,
10 Red Lion Square. W.C.

Stone—Walley.—On the 25th Oct., at Holy Trinity Church, Haverstock Hill, by the Rev. H. E. B. Arnold, M.A., sometime Vicar of St. Matthew's, Oakley Square, assisted by the Vicar, the Rev. B. Saunders Lloyd, B.A., Percy Thomas, second son of Thomas Stone, 29 Oakley Square, N.W., to Gertrude Amy, youngest daughter of the late Thomas Walley, Principal of the Royal (Dick) Veterinary College, Edinburgh.

OBITUARY.

Daniel M'Gregor, M.R.C.V.S., Bedlington,
Graduated, Edin: April, 1863

Mr Daniel M'Gregor, a well-known north-country veterinary surgeon, died on October 23rd at his residence, Sleekburn House, Bedlington Station. The deceased gentleman, although in his 70th year, had enjoyed remarkably good health, and was engaged in his professional duties up till a few days ago, when he received a chill. Complications set in, which resulted in his death. He was the brother of Dr. M'Gregor, of Edinburgh, the well-known divine. He was born in Perthshire, and graduated at Dick College. When 22 years of age he came north, and went into partnership with the late Mr. Chas. Hunting in Durham. He subsequently took over the business, and afterwards came into the East Northumberland district, where he had been in practice for over 40 years. The deceased gentleman was held in very high regard by a large circle of friends and acquaintances. He leaves a widow and grown-up family. Deceased was of a quiet and unostentatious character, and took no active part in public affairs. In politics he was an ardent Conservative, and did good service for the party at the last election.—*Newcastle Daily Journal.*

CORRESPONDENCE.

NOTIFICATION OF ANTHRAX.

Sir,

There is, in a few districts at least, another factor which prevents cases of anthrax being reported, in addition to those ably summarised by Mr. Dunstan. That factor is pure and simple ignorance on the part of the farmer.

Even in these days of County Council lectures and general popular enlightenment, there are still *some* out-of-the-way parts of England unblessed by veterinary science, in which the characteristic post-mortem lesions of "splenic apoplexy" are familiar to the farmers, and anthrax is unknown. A dozen years ago I lived in a remote country village, miles away from any veterinary surgeon, where it was not uncommon for cattle to die suddenly, and for the owner, butcher, or local wiseacre to *open the carcase*, and find "splenic apoplexy." I never saw one of these post-mortems—and should then not have been any wiser if I had done—but the name and the invariable history of sudden death leave no doubt in my mind as to what these cases really were. I may say that farmers losing cattle from "splenic apoplexy" in that district never made any secret of the fact—they were quite ignorant that the disease was a scheduled one.—Yours truly, "Ex-Countryman."

REMUNERATION OF EXAMINERS.

Sir,

I agree with the anonymous member of Council who has introduced this subject that it is one of great importance—but I am not certain that he has taken the best means of furthering his object. With your permission I propose to comment a little on his utterances, actuated chiefly by the hope of inducing him to amplify them.

One point must, however, be kept in mind, which your correspondent seems to over-look. He objects in strong terms to the profits arising from examinations being utilised to meet the general expenses of the profession, and contends that such general expenses should be paid by the members of the profession themselves but this opens up a question quite apart from that of the just remuneration of examiners. "A Member of Council" must know that beyond the interest upon less than £8,000 invested in Consols, the R.C.V.S. has absolutely no income save that derived from examination and registration fees. Of course the Council might attempt to obtain, and might succeed in obtaining, legal powers to secure an income from the profession, but *for the present*, as in the past, the R.C.V.S. *must* either make money from the examinations or drift at once to bankruptcy.

Coming to the actual subject of your correspondent's letter, as indicated by its title, I think he would have strengthened his case had he given details which supported it. Everyone will agree that examiners ought to be fairly paid, and certainly ought *not* to be made to pay for the honour of performing their exceedingly difficult and responsible work, as "A Member of Council" says they do. He makes a general statement to that effect, quotes some figures which scarcely seem to support it, and has left one at least of his readers somewhat sceptical as to the correctness of his information, and certainly desirous to have it in more detail. How are the examiners paid at present?

During the last two years, on your correspondent's own showing, the Council have *spent* £1,800 per annum upon the examinations. How much of this has been spent on travelling expenses, etc., and how much devoted to the payment of the examiners?

Again, "A Member of Council" suggests that the examiners, in addition to their travelling expenses, be paid on a basis of so much per day—on what basis are they paid at present? If not per day is it per hour, or per student, and whatever the basis may be, what is the *scale* of fees? Without knowledge of these points it is really impossible for any fair-minded man to form an opinion on the matter at all.

I do not quite follow your correspondent when, at the close of his letter, he says, "but this, of course, is a matter for the Council and Finance Committee." In that case why does he appeal to the profession? Personally, I think that this, and *all the other business with which the Council has to deal*, forms matter for the consideration of the profession; but I certainly do not think that the profession ought to pass judgment upon it without a much more detailed knowledge than is afforded by your correspondent's letter.

Finally, it is perhaps not unfair to ask if "A Member of Council" has made any very serious attempt to bring the matter forward within the Council chamber itself. It is several years since I remember seeing any discussion anent the remuneration of examiners in the published reports of the Council meetings. Would not your correspondent's best course be to bring the subject openly before the Council, and thus indirectly before the members of the profession, who would then be much better able to judge it in all its bearings than they are at present?—Yours faithfully,

"A Member of the Profession."

ON PATENT MEDICINE VENDORS AND EMPIRICS.

Sir,

I am at one with Mr. Wallis Hoare. His remarks in your last issue are excellent and to the point. The public want satisfaction, not science. The medical and veterinary professions have deceived themselves by believing that their bald scientific advice without the symbolic bottle of medicine would be appreciated. The public has given its answer. Mystery it has faith in—because it acts as a charm. Hence the great increase of quackery and quack advertisements. The quack medicine vender caters for the 90 per cent. and the professions for the other 10. Without the cross there would be no faith in religion; without the wig and gown no awe for the law; and without the mysterious contents of the bottle no faith in the professional adviser. We cannot live by plain bread alone, we want a little meat. Consequently the majority of doctors and veterinary surgeons, who have to live by the sweat of their brow, cannot live by giving unadulterated advice alone. It must charm the public mind by giving a bottle of stuff.

"Humbug, all is Humbug."

BLACKLEGINE, AND ITS SUPPLY TO FARMERS.

Sir,

As letters appear from time to time in your widely read journal on this subject, may we be permitted to briefly state our position in connection therewith.

When we became the British agents for the distribution of the "Pasteur" Biological Products we pointed out to the Pasteur Vaccine Company, who are the accredited distributors of the various products made at the Pasteur Institute, the desirability of supplying them only to the veterinary profession.

As their usefulness became more and more known and recognised, so their popularity increased, and we were almost daily opportuned to supply the farmer, dairyman, bailiff, etc., and at a cost of much time and money in postage we refused to supply anyone outside the profession, the exception being Wholesale Drug Houses from whom we obtain an undertaking that they supply no laymen with the products obtained from us.

There are, however, two animal medicine firms with qualified members of the profession at their head, and being such we felt bound to svpply them, hence our reply to Mr. Taylor as given in the current number of *The Record*.

Other medicine firms have approached us to supply them but we have in every instance refused to do so.—Your obedient servants,

Chas. H. Huish & Co.

R.C.V.S. EXAMINATION.—A CORRECTION.

Sir,

I am directed to inform you that in the returns of the passes at the July Examination (see *The Veterinary Record* of July 28th, p. 65), *Col. F. A. Le Poer Trench* was reported to have passed with *1st Class Honours*, and *Mr. L. Thompson* with *2nd Class Honours*, whereas the first-named gentleman passed with *2nd Class Honours*, and the second with *1st Class Honours*. I shall be glad if you will have the mistake noted in the next issue.—Yours faithfully,

A. W. Hill, *Secretary*.

Royal College of Veterinary Surgeons,
10 Red Lion Square, W.C.
October 29th.